REMARKS

This invention relates to a process for tuft and filament binding in unfinished carpet using hot melts based on amorphous poly-α-olefins and bonded materials produced by the process. More specifically, as recited in above-amended Claim 1, the invention is a process for tuft and filament binding to an unfinished carpet to provide a coated carpet, which comprises applying a coating composition which comprises from 50% to 100% by weight of one or more substantially amorphous poly-α-olefins as a melt to the backside of the unfinished carpet in a coating weight amount of from 20 to 1,500 g/m^2 to bind the tuft and filament to the unfinished carpet, wherein the melt viscosity of the coating composition at 190°C is from 200 mPas to 20,000 mPas, and wherein the substantially amorphous poly-α-olefin comprises at least one selected from the group consisting of atactic poly-1-butene, propene-ethene copolymer, propene-1-butene copolymer, 1-butene-ethene copolymer and propene-1-butene-ethene terpolymer.

The rejection of Claims 1-10 and 17-18 under 35 U.S.C. § 103(a) as unpatentable over U.S. 5,241,014 (Kehr et al), is respectfully traversed. Kehr et al disclose a process for the production of largely amorphous poly-α-olefins with a narrow molecular weight distribution which comprises reacting a substantially amorphous poly-α-olefin starting material in the presence of a radical donor under shear stress at a temperature above the softening point of the poly-α-olefin, which reaction causes, *inter alia*, a reduction of melt viscosity. See Claim 1 therein. Kehr et al discloses that their products have a use as heavy coating compounds for carpets, referring to EP-A-0 309 674 (column 2, lines 46-49). The highly filled compositions disclosed in U.S. 5,047,462 (Kehr et al '462), which is the U.S. patent equivalent of said EP-A-0 309 674, have such a high melt viscosity that they cannot penetrate into the pile threads and pile loops; as a consequence, with these compositions, any

tuft and filament binding is impossible. (Note also that Kehr et al '462 is submitted in an Information Disclosure Statement (IDS), discussed later.) The described heavy coating compounds instead are used for a completely different purpose, namely for the production of carpet tiles which are rather rigid and heavy and therefore do not slip. Contrary to the finding by the Examiner, Kehr et al does **not** disclose coating the back side of an unfinished carpet as a melt, as required by the present claims.

For all the above reasons, it is respectfully requested that the rejection over Kehr et al be withdrawn.

The rejection of Claims 1-14 and 17-18 under 35 U.S.C. § 103(a) as unpatentable over EP 518014 (EP '014), is respectfully traversed. EP '014 is described in the specification herein at page 1, lines 1-6. As stated therein, the back coating described in EP '014 contains appreciable amounts of isotactic polypropylene and filler and therefore is very viscous in the molten state, and the coating composition therein does not provide tuft and filament bonding. For example, EP '014 exemplifies a composition of 33.3% propylene random copolymer, 33.3% atactic polypropylene, and 33.3% of a batch consisting of 70% of barite and 30% propylene homopolymer. Atactic polypropylene (VESTOPLAST 891) has a melt viscosity at 190°C of 115,000 ± 35,000 mPas, as confirmed by the product brochure for this product, submitted with the above-mentioned IDS. Thus, EP '014 neither discloses nor suggests the presently-claimed process using a coating composition of the presently-recited melt viscosity. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-18 under 35 U.S.C. § 103(a) as unpatentable over JP 55-152630 (JP '630), is respectfully traversed. JP '630 discloses a carpet that is back-coated with a relatively high molecular weight copolymer, having a very high melt viscosity with a melt flow rate (230°C/2.16 kg) of 0.5-100. This melt flow rate is associated with a melt viscosity that is substantially greater than the presently-recited upper limit of 20,000 mPas. For

example, the above-discussed VESTOPLAST 891 brochure demonstrates that VESTOPLAST 891, having the above-discussed melt viscosity, has a melt flow rate (230°C/2.16 kg) of 340. As a lower melt flow rate corresponds to a higher melt viscosity, it is evident that a polymer with a melt flow rate of 100 will have a melt viscosity greatly in excess of 115,000 ± 35,000 mPas. Therefore, the use of such a viscous material, as described in JP '630, would not permit penetration into threads or loops due to the high melt viscosity. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claim 12 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

Submitted herewith is the IDS, alluded to above. Note that the reference "Die Verwendung . . ." contains an underlined passage which may be translated as follows:

> "With tufted carpets a precoat is necessary for the tuft and filament binding which is, as a rule, effected by a latex precoat. Newly the precoat is also carried out with hot melt compositions based on APP S 66."

Note that atactic polypropylene was omitted from the above amendment of incorporating Claim 4 into Claim 1.

The Examiner is respectfully requested to initial the Form PTO-1449 submitted herewith, and include a copy thereof with the next Office communication.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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